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波

**Kevin Fickenscher, MD**  
Chief Strategic and  
Development Officer  
Dell Healthcare Services

**The Changing  
Face of  
Healthcare:  
Here, There,  
Everywhere,  
Anywhere**



# 津波



大波のつるぎ  
神奈川  
江村家

1831年

# The Metaphor...

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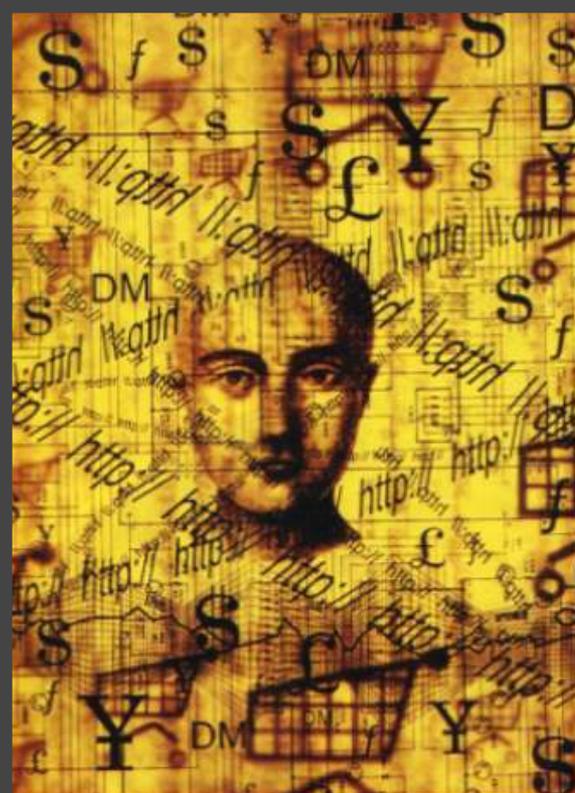
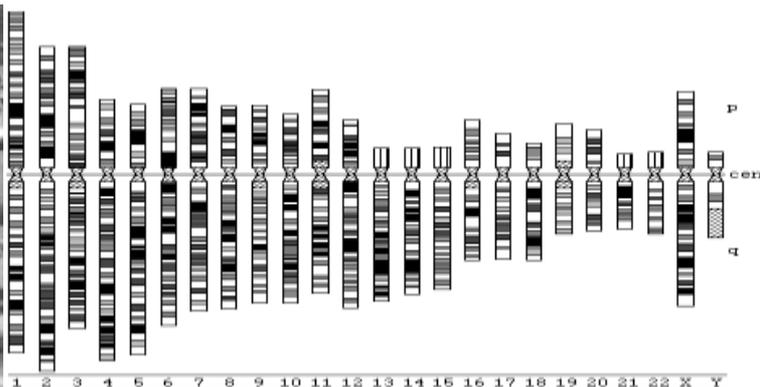
# The Metaphor...

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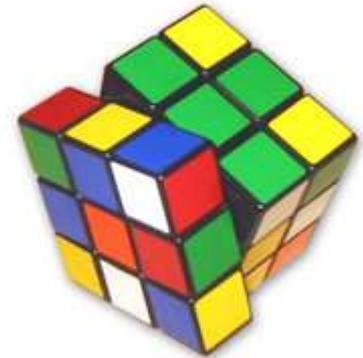
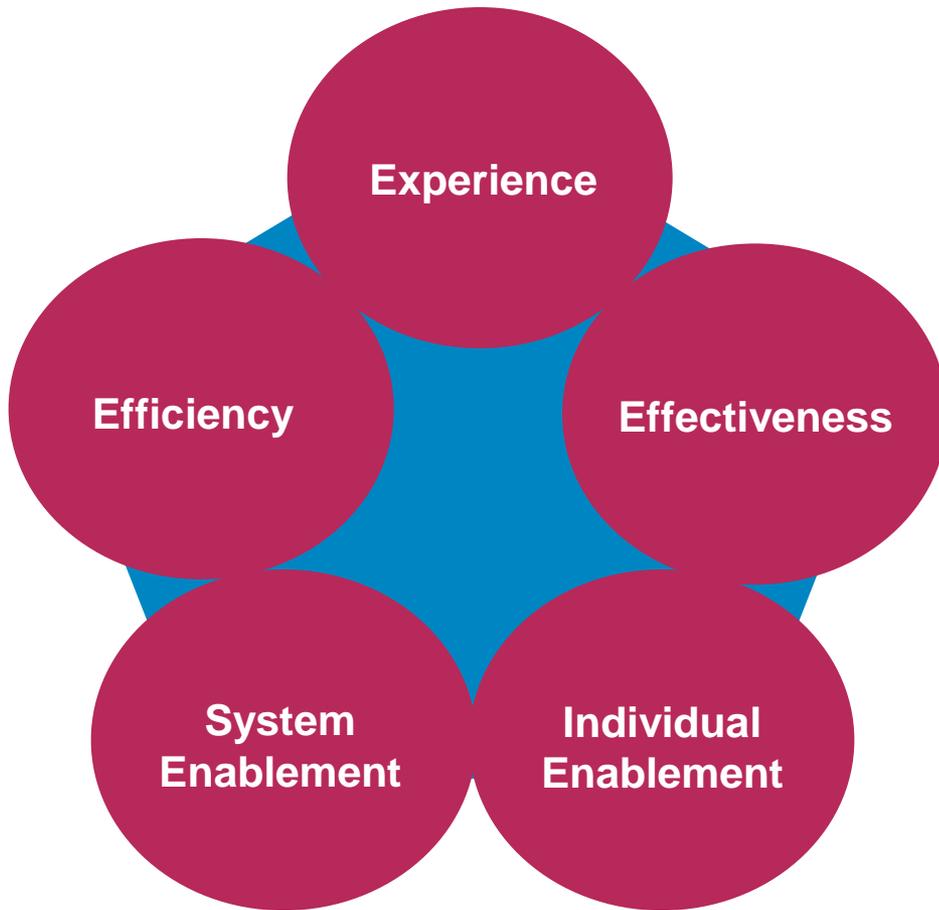
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# The Domains of Change – in Healthcare...



# The Future of Healthcare...



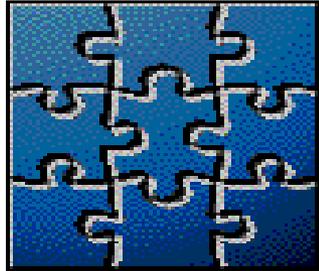
# The Future of Healthcare...

- Peripheral Intelligence
- Workforce Globalization
- Professional Collaboration
- Diagnostic Diffusion
- Cloud Computing

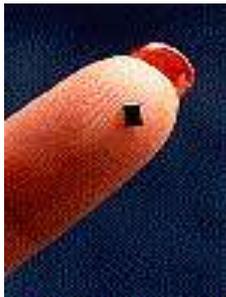


# The Future of Healthcare...

## Predictive Knowledge



Standardization



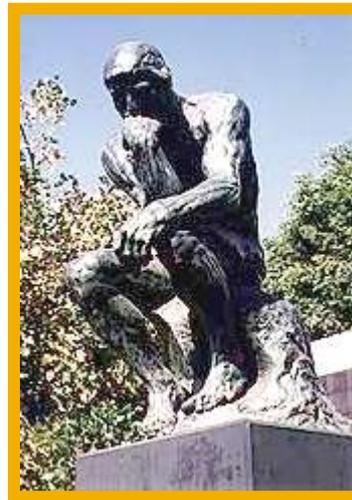
Peripheral Intelligence



CaaS

Artificial Intelligence

Knowledge Management



Pattern Recognition

Data Mining

In May, 2010 *Lancet Neurology* published a study showing that the generic drug lithium did nothing to slow the course of amyotrophic lateral sclerosis (ALS)

Decision Support

December, 2008, PatientsLikeMe, a for-profit patient

Benchmarking networking site and data aggregator based in Cambridge, MA, came to a similar conclusion, more quickly and at much less cost.

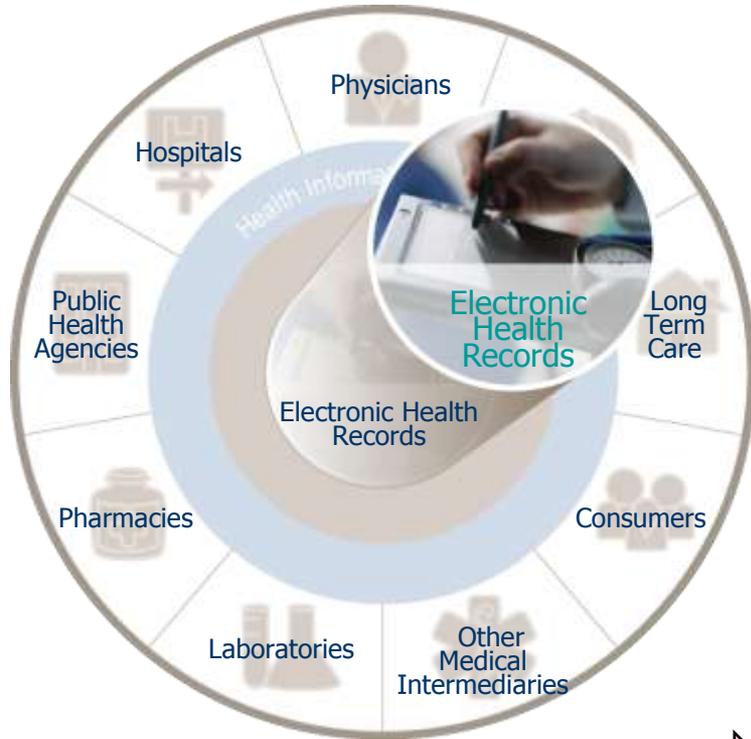
Personalization

# How will Predictive Knowledge Management become reality?

- **he connect i v i t y**
- **he . et wor k**
- **he . enone**
- **nd, r anspar ency**

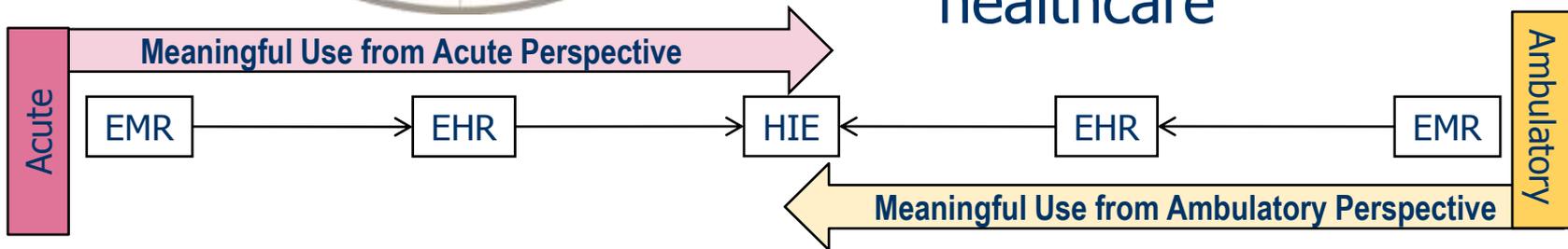


# ARRA definition of meaningful use will stimulate HIE growth

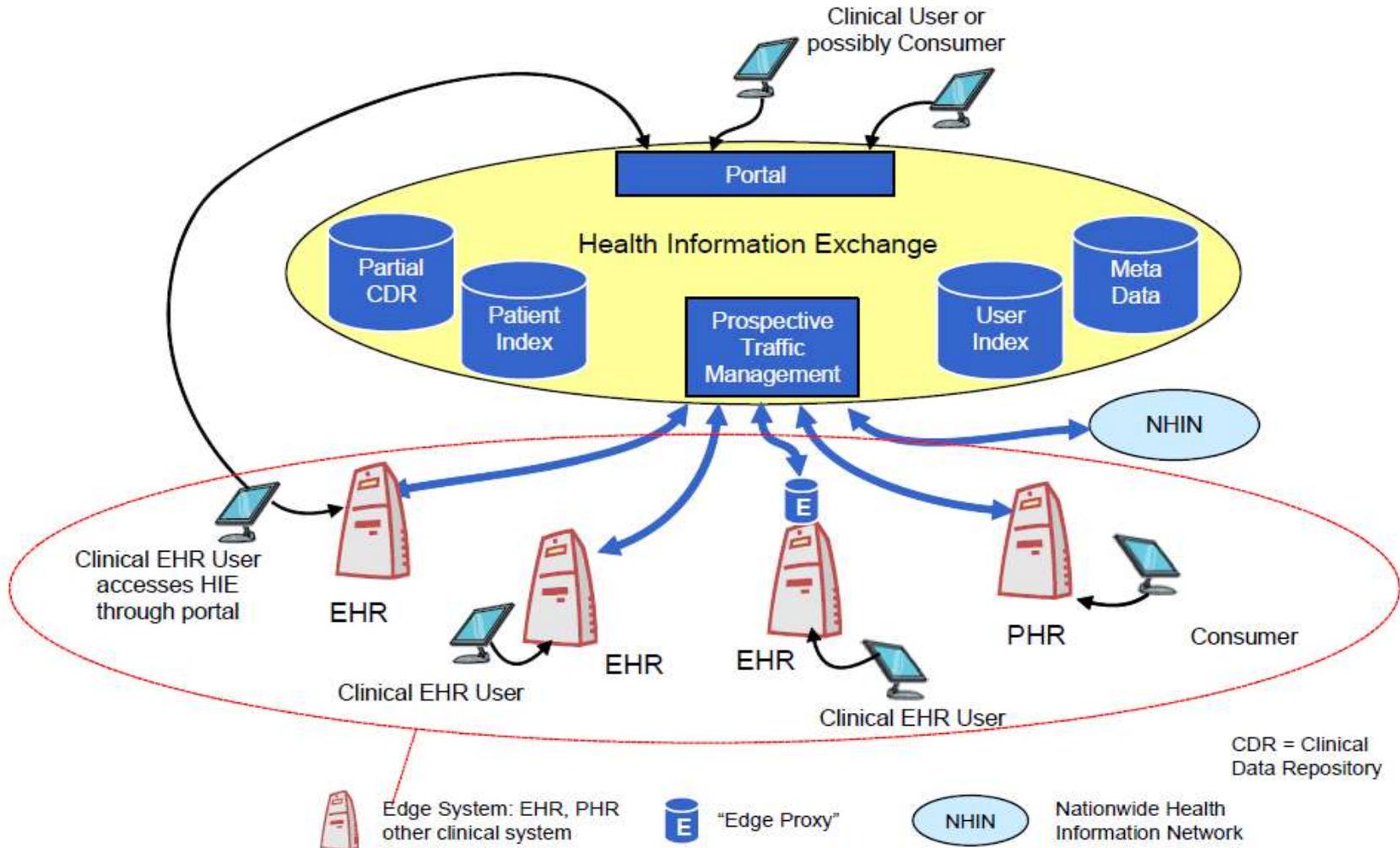


## Electronic Health Records

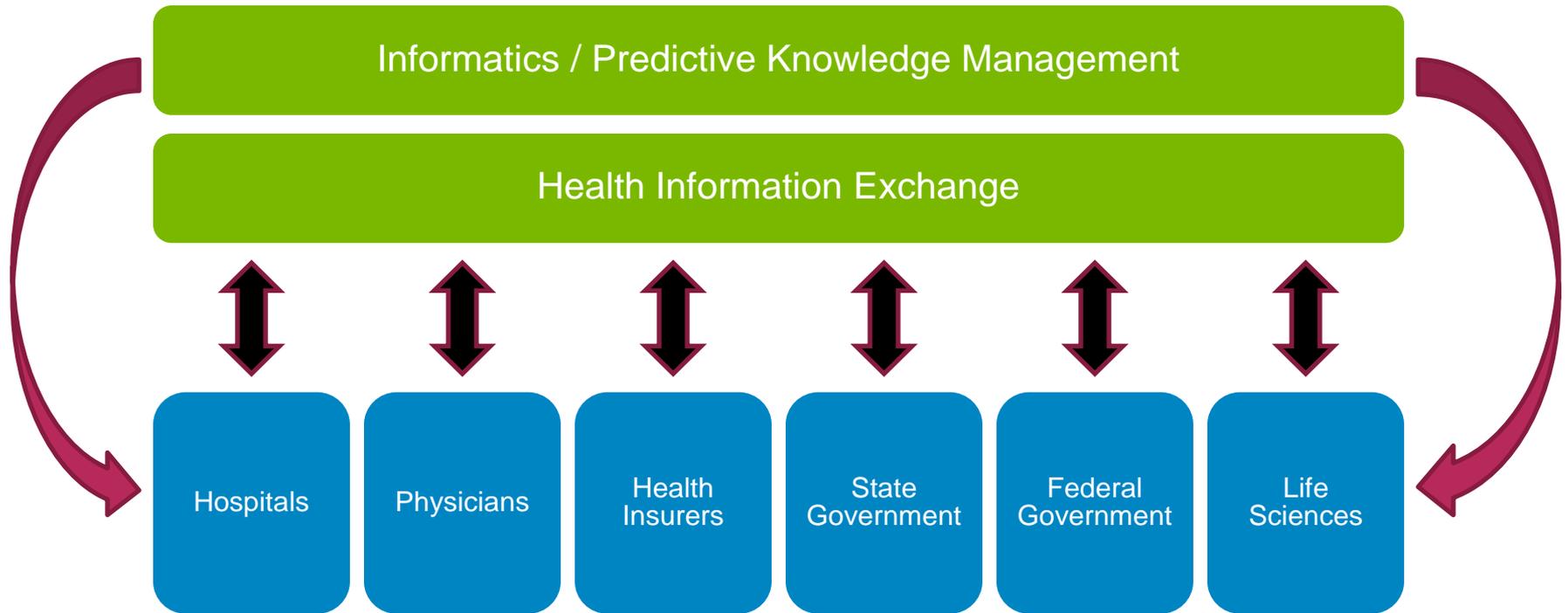
Certified EHR technology is connected in a manner that provides for electronic exchange of health information to improve quality of healthcare



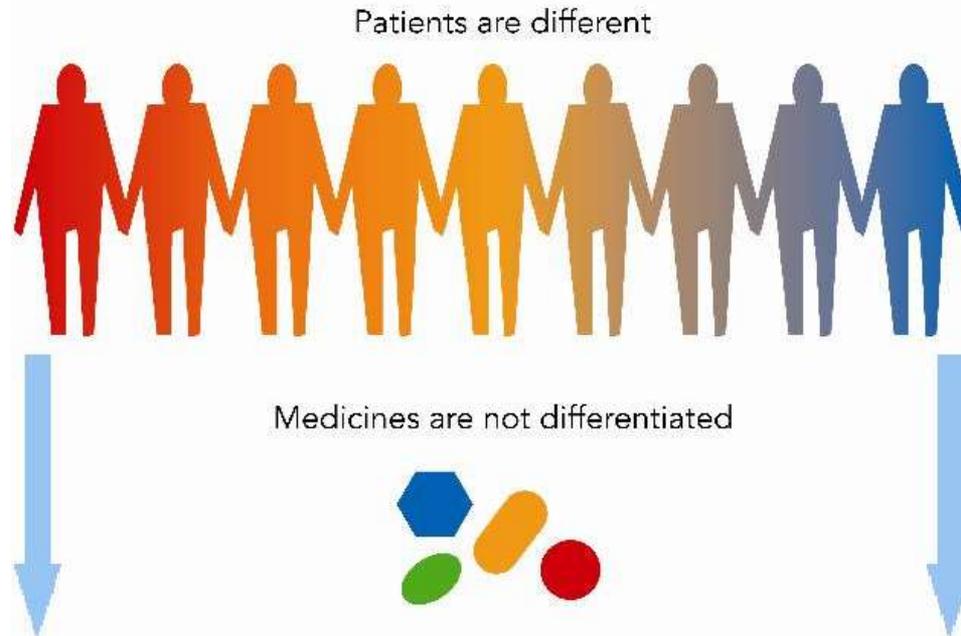
# The Connectivity: Interoperability Exchanges



# Health Services Real Time: expansion opportunities



# Today's medicine challenge: One size doesn't fit all



~ 30% of patients do not benefit from medicines<sup>1</sup>  
(100,000 deaths and 2.2 million nonfatal events from ADR in the US in 1994)

<sup>1</sup>JAMA 1998, 279: 1200

Source: Bayer HealthCare Diagnostics and Burrill & Company

# Information Makes Healthcare Personal... Again

Diagnosis



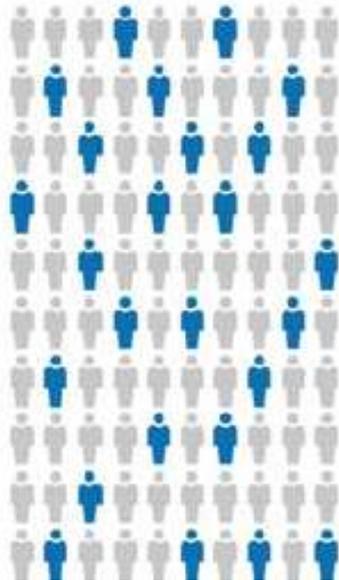
Treatment

# Personalized Medicine – The current paradigm

## THE RIGHT PERSON

### WHY IT MATTERS:

Finding the right people to benefit from genomic medicine can improve disease management and lower healthcare costs.



## THE RIGHT TEST

### WHY IT MATTERS:

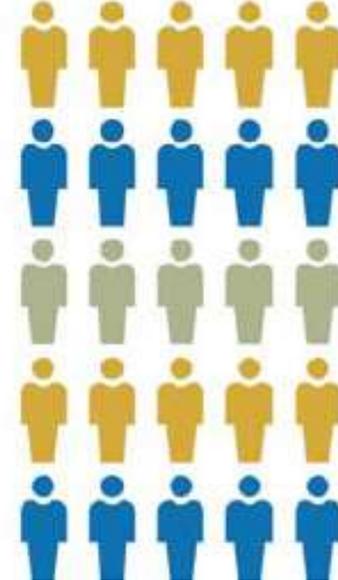
Getting the wrong test can misinform medical decisions and increase healthcare costs.



## THE RIGHT INTERPRETATION

### WHY IT MATTERS:

Delivers the full value of genetic information and enables physicians to make appropriate management decisions.

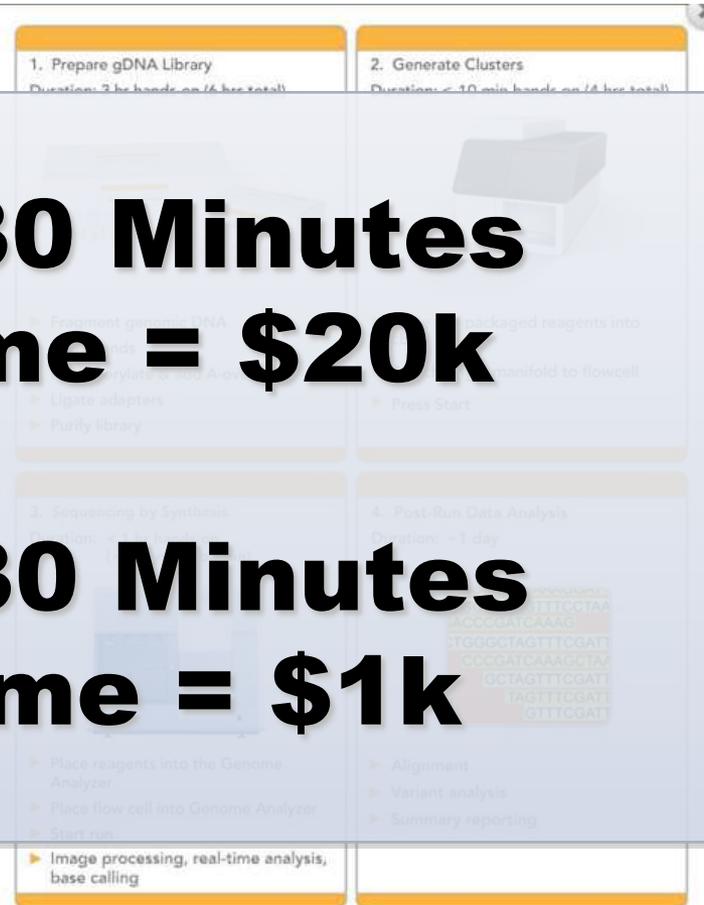


(Source – DNA Direct)

# The Genome: What it Takes and What it Costs?

**Today: 1 Tb - 30 Minutes  
Human Genome = \$20k**

**2012: 10 Tb - 30 Minutes  
Human Genome = \$1k**



illumina®

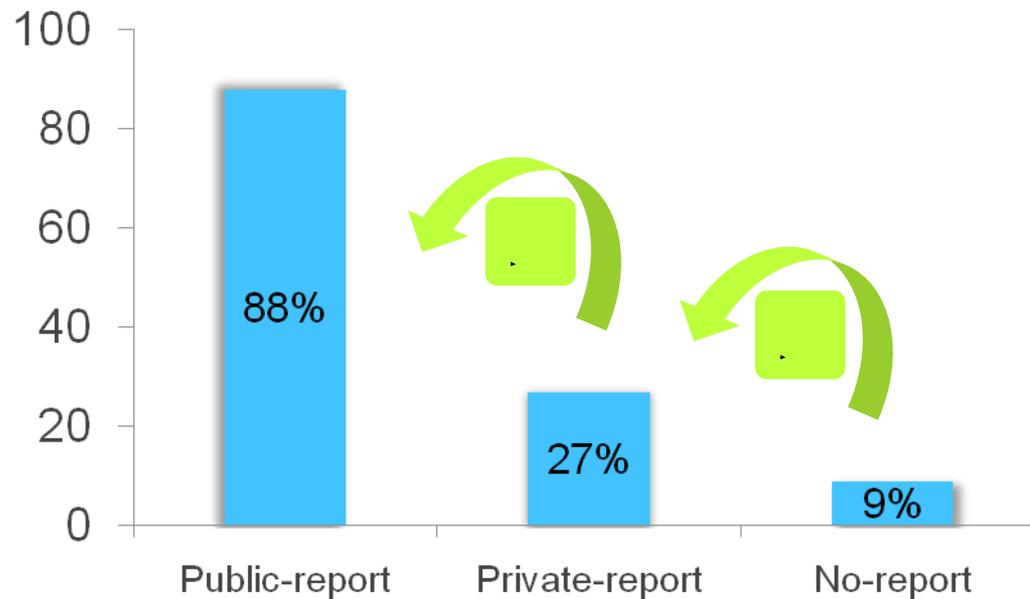


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# Transparency

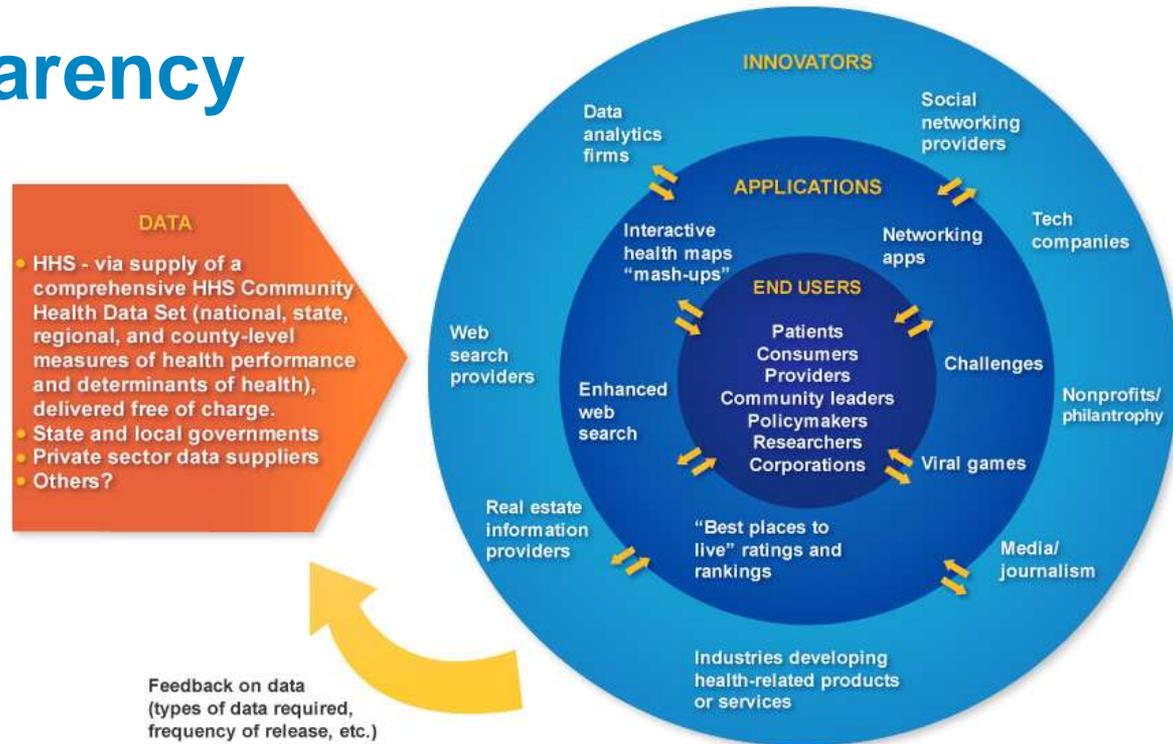
Public disclosure leads to performance improvement

Percentage of hospitals with quality improvement activities in reducing hemorrhage following poor results in performance



Reference: Hibbard et al. Health Affairs 2003;22(4):84

# Transparency



- community health data initiative – June, 2012
  - public-private project = educate citizens on health care performance in their community + opening up the medical system
  - provide data online
    - › initially Medicare data on disease, quality, cost and utilization
  - similar to the approach which compiles climate statistics
  - and, it's just the beginning...

# Dell Services in Personalized Medicine

- manages the \ system in \ hospitals that provide oncology services
- operates the \ national community cancer center program sites t. \osephs and scensi on eal th



**"#1 Global Healthcare IT Services Provider"**  
**Gartner, Inc. per press release Plano, Texas, April 28, 2010**

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**"#1 IT Healthcare Vendor"** ranked by more than 500 healthcare providers in annual "Vendor Overall Preference" survey. Responses emphasize importance of trust, innovation, customization and reliability."  
**Datamonitor Black Book of Outsourcing' Survey, 2009**

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**"Best Interest Alignment"** in Outsourcing Excellence Awards along with Northern Arizona Healthcare (NAH)  
**Everest Group and Forbes Magazine, 2009**

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**"Best Partnership,"** the top award in the Outsourcing Excellence Awards, with Harvard Pilgrim Health Care  
**Everest Group and Forbes Magazine, 2008**



# So, What Does It All Mean?

- **connectivity**
- **performance**
- **network**
- **and, transparency**

**= transformation...**



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# Thank You



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